

PATENT APPLICATION

UNITED STATES PATENT AND TRADEMARKS OFFICE

In Re the Application of:) Art Unit: 3782
)
VON SPRECKELSEN et al.) Examiner: Nathan J. Newhouse
)
Serial No.: 09/701,057) Confirmation No.: 7735
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Filed: November 22, 2000)
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Atty. File No.: 44257.830001)
)
For: "THIN-WALLED PLASTICS)
BOTTLE, CLOSURE AND)
BOTTLING PROCESS")
)
Mail Stop Appeal Brief - Patents	
Commissioner for Patents	
P.O. Box 1450	
Alexandria, VA 22313-1450	

SUPPLEMENTAL REPLY BRIEF

Dear Sir:

This supplemental reply brief is filed in response to the SUPPLEMENTAL EXAMINERS ANSWER mailed on November 13, 2007.

STATUS OF CLAIMS

The claims remaining in this application are claims 12-16, all of which currently stand rejected. The rejection of claims 12-16 are appealed.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claim 16 should be rejected under 35 U.S.C. 103(a) as being unpatentable over Gach (U.S. Patent No. 4,815,618; hereinafter "Gach") in view of Graboski et al (U.S. Patent No. 6,117,506; hereinafter "Graboski").

2. Whether claim 12 should be rejected under 35 U.S.C. 103(a) as being unpatentable over Gach in view of Graboski and further in view of Flanagan (U.S. Patent No. 6,082,568; hereinafter "Flanagan").

3. Whether claim 13 should be rejected under 35 U.S.C. 103(a) as being unpatentable over Gach in view of Graboski and Flanagan and further in view of Kitahora et al. (U.S. Patent No. 6,076,334; hereinafter "Kitahora").

4. Whether claims 14-15 should be rejected under 35 U.S.C. 103(a) as being unpatentable over Gach in view of Graboski and Flanagan and further in view of Kauffman et al. (U.S. Patent No. 4,141,680; hereinafter "Kauffman").

ARGUMENT

The SUPPLEMENTAL EXAMINERS ANSWER generally corresponds to the previous SUPPLEMENTAL EXAMINERS ANSWER mailed on June 28, 2005, which generally corresponds to the EXAMINERS ANSWER mailed on September 2, 2003 with the addition of:

- a short section under item 10 "**Grounds of Rejection**" at page 3 beginning at line 11 which deals with point 1 of the REMAND TO EXAMINER (mailed on May 19, 2005);
- a section dealing with the Nolan reference in item 11 "**Response to Argument**" at page 6 beginning on line 12 to page 7 line 4 which deals with point 2 of the REMAND TO EXAMINER; and
- a section dealing with Exhibit I (Mavin) beginning on page 7 line 8 to page 8 line 8 which deals with point 3 of the REMAND TO EXAMINER.

Re Point 1 of the REMAND TO THE EXAMINER:

In its REMAND the Board queried whether the examiner had in fact considered the AMENDMENT AFTER FINAL in preparing the ANSWER.

The examiner by making the amendments to change reference from claim 11 to claim 16 asserts that he has, and although he has remarked on the limitation to an injection moulded neck (i.e. a separate spout) and an injection moulded cap, he relies on case law to suggest that the limitation can be ignored in this product claim.

The examiner apparently relies on the same case law to dismiss the limitation to an extrusion blow moulded bottle body.

It is considered that this is a misapplication of that case law.

In order to clearly teach a critical feature of the bottle body to those skilled in the art, it is proper to define the bottle body by its method of manufacture, and to contrast this with the method of manufacture of the neck assembly and cap which give those components different characteristics that are perceptible in the physical end product.

A person skilled in the art would readily be able to distinguish an extrusion blow moulded bottle body from a bottle body made by other means, especially an injection stretch

blow moulded bottle body, as bottles produced by the two methods have fundamental differences.

For example, injection stretch blow moulded bottles have injection moulded necks which are thicker than the rest of the bottle, they can be made to very fine tolerances, and even if the walls of the bottle are made thinner to reduce weight, the thickness of the necks remain unaffected.

In contrast, extension blow moulded bottles have weak necks that get correspondingly weaker as the bottle and its walls get thinner.

As a result, the necks of extrusion blow moulded bottles cannot be made to the same tolerances as injection stretch blow moulded bottle necks, the necks tend to be oval rather than circular, they have imperfect top surfaces, and they have excess material where the seam meets the opening of the neck.

Furthermore, extrusion blow moulded bottles always have a seam and they can be formed with a handle that the user can pass fingers through, in contrast injection stretch blow moulded bottles never have a seam and cannot be formed with a handle that the user can put fingers through. In addition an injection stretch blow moulded bottle would normally have a dimple on its base where the plastic is injected and they are symmetrical around at least one axis, if not two. Extrusion blow moulded bottles never have a dimple and are not necessarily symmetrical.

In appellants' specification at page 3 line 19, attention is drawn to the fact that when appellants' specification addresses extrusion blow moulding, injection stretch blow moulding is not included.

In *re Thorpe* supports the assertion that if the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (MPEP, § 2113). However, cited in MPEP § 2113 also is *In re Garnero* 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979), which states that the structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product.

In the present context, it is submitted that one skilled in the art would be readily distinguish the manner of manufacture of each of the components from the product.

Gach does not describe the manner of moulding its container, but as pointed out in the APPEAL BRIEF at page 12, Gach's container must be strong enough to resist a fitting force, and light weight extrusion blow moulded containers are structurally weak throughout.

By contrast, light weight injection stretch blow moulded bottles have structurally strong necks. Therefore one skilled in the art is not led to consider an extrusion blow moulded container.

Graboski discloses a method of multilayer extrusion that could be used to provide a light barrier. A container produced by Graboski's method would equally be recognisable and distinguishable from a thin-walled extrusion blow moulded bottle body. Graboski describes a range of wall thicknesses of 0.381 mm (0.015in.) to 2.159mm (0.085in.) see column 3 lines 51 to 58. For most of this range it would not be economic to make a milk bottle at the average of these thicknesses. Normal HDPE extrusion blow moulded bottles, which are monolayer, are 0.4 to 0.5mm thick in order to avoid pinholes in the bottle wall, but never over 0.9 mm.

Appellants' give exemplary thicknesses at page 5 line 10 of appellants' specification. It is denied that one of ordinary skill in the art could produce a product using the teachings of Gach and Graboski that was the same as the product defined in claim 16. The missing link is the lack of anything to teach one skilled in the art that the different components would have different properties arising from their manufacturing method.

The assertion that a thin-walled extrusion blow moulded bottle body can be identified by inspection of the body alone is supported by the fact that Exhibit I describes at page 4 lines 13 to 36 characteristics of container necks formed by extrusion blow moulding, similar to those described by the appellants at page 4 line 6 to 18 of appellants' specification. When independent manufacturers concur, it is submitted that the examiner should accept that the limitation at least to extrusion blow moulded bottle bodies is a product limitation sufficient to distinguish claim 16 from the prior art.

Re Point 2 of the REMAND TO THE EXAMINER:

The examiner has not introduced any new ground of rejection of any of the claims based on Nolan. Therefore the references to Nolan are simply to deny the appellants' argument that its invention solves a long-standing problem of reliably mating a **resealable** injection moulded cap to an extrusion blow moulded thin-walled bottle body as set out on page 15 lines 1 to 4 of appellant's APPEAL BRIEF.

In the REPLY BRIEF mailed October 14, 2003, appellants discuss Nolan and acknowledge that Figure 9 describes a typical prior art milk bottle. It is true, as the examiner points out, that the embodiment of Nolan's Figure 9 attempts to solve the technical problem of resealability by using a backing layer that may then serve as a gasket for subsequent reclosure of the bottle by the cap. Nolan therefore recognises that the technical problem solved by appellants' present invention existed at least as early as Nolan's filing date of February 17, 1987.

As already explained in appellants' REPLY BRIEF, gaskets of this type are poor resealing devices (for example see page 3 lines 15 to 18). The gaskets described in Nolan are primarily used in containers of dry goods. The primary purpose of the gasket is as carrier/backing material for the foil during manufacture. The foil is attached to the gasket by a layer of wax. During the process of heat sealing the foil to the neck of the container the wax melts and the foil detaches from the gasket. Gaskets of the Nolan type are rarely used in liquid containers because the liquid tends to soak into the gasket upon reseal. The layer of wax and the other components of the gasket also render them expensive and as such it would be uneconomical to use them in milk bottles. The Nolan solution may provide a satisfactory **primary** seal, as did other prior art milk bottles, but it has no impact on the technical problem of **cap-resealability** and **container-weight** which, as explained in the APPEAL BRIEF, are simultaneously solved by appellants' present invention.

Re Point 3 of the REMAND TO THE EXAMINER:

The examiner comments on Exhibit I.

On page 7, line 21 of the SUPPLEMENTAL EXAMINERS ANSWER, the examiner suggests that appellants' invention is that the cap is sealed to the bottle by a foil liner that is heat sealed to the rim of the container. This demonstrates the examiner's fundamental misunderstanding of the invention as claimed.

A conventional injection moulded cap is removably secured to the neck. The closure is resealable because both cap and neck are injection moulded components that can be made to reliably reseal.

None of the other solutions work completely as they all fall foul of the mismatch in tolerances between a conventional injection moulded cap and an extrusion blow moulded bottle, and they perform badly on tamper evidence, primary seal or secondary seal criteria, or a combination of all of them.

Appellants' claimed technology performs exceptionally well in all of these criteria, because of its novel approach – to DOUBLE weld a separate neck (i.e. a spout) to a bottle, and primary seal with the foil – thereby allowing the consumer to rupture this thin foil to gain access, and allowing the consumer to reseal between the spout and cap, which are both injection moulded components.

It is of course irrelevant and expected that a competitor points out numerous alleged problems with appellant's invention.

Further submissions in support of the existence of Long Felt Need:

The long felt need that appellants assert is the creation of a **resealable** cap for an extrusion blow moulded bottle body.

Leakage from the primary seal is of most concern to bottlers, and they have attempted to solve the problem by using a peelable foil. Resealability, on the other hand, is a consumer issue.

The use of peelable foils has not completely eliminated the leakage problem. If the cap is applied to the bottle too tightly, it distorts the neck, the foil does not sit flush to the neck, and as a result does not form a good seal. If the cap is not secured tightly enough, the foil will not contact the lip on the neck of the bottle evenly all the way around its circumference, and as a result the

foil will fail to seal the neck all the way round, resulting in gross leakage. Furthermore, very few milk bottles in the US use peelable foils due to the additional expense.

The cost of peelable foils is about \$2 per thousand bottles, and around 9 billion milk bottles are produced in the USA per year, therefore the additional expense of using foils would cost the industry about \$18 million.

In response to the examiner's statement that appellants showing of a long felt need is not sufficient, appellants refer the Board to older prior art such as US Patent No. 3,223,269 (Williams) assigned to Owens-Illinois Glass Company which describes the problems of leakage created by variations in the finish of a bottleneck, see column 1 line 29 onwards. Although this 1965 publication is concerned with the use of moulded pliable plastics caps made of material such as polyethylene in conjunction with glass or rigid plastic material bottles, it clearly demonstrates that leakage issues are a technical problem that has been recognised for many years.

The appellants further submit new exhibits J and K from the US trade press relevant to this technical field and in response to the new grounds of rejection

- Exhibit J is a copy of an article from the Winter Edition 2002 of Dairy Foods Magazine which discusses the problem of leakage in relation to plastic gallons. This emphasises the fact that both initial-leakage and reseal-leakage remain a problem for consumers and retailers using the most up to date closures.
- Exhibit K provides several articles that discuss the technical problems of leakage and resealability:
 - Dairy Field, 185(3): 1(3), March 2002 in which a passage concerning the ongoing quest for resealability has been highlighted;
 - Dairy Foods, 104(1): 56, January 2003 announcing a Portola product aimed at solving the same problem; and
 - Dairy Field, 183(4): 66, April 2000 discussing the benefits of the introduction of a resealable closure.

Conclusion:

Again it is respectfully requested that the examiner's final rejection of claims 12-16 of appellants' application be reversed.

Respectfully submitted,

HOLLAND & HART LLP

By: 

Kenneth C. Winterton

Registration No. 48,040

P.O. Box 8749

Denver, Colorado 80201-8749

(303) 473-2700, x2717

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